SILLA SAI SAMAY

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SUMMARY

Backend-focused software engineering student with strong foundations in Java, REST APIs, scalable full-stack development, and AI-integrated systems, experienced in building production-oriented applications and solving complex engineering problems through analytical system design.

EDUCATION

B.Tech in Computer Science and Engineering 2023 – Present
Amrita Vishwa Vidyapeetham, Amritapuri CGPA: 8.36

Senior Secondary Education (CBSE) 2021 – 2023
Narayana Junior College, Visakhapatnam 89.2%

Secondary School Education (CBSE) 2021
Sri Chaitanya Techno School, Visakhapatnam 92.2%

PROJECTS

Learn Lead – AI-Orchestrated Adaptive Mentorship Platform 2025 – Present
React, TypeScript, Java, AWS Lambda, API Gateway, Amazon Bedrock

- Architected a serverless mentorship backend on AWS Lambda and API Gateway + Rest API that delivers progressive coding hints and interview prep modules to users, eliminating idle server costs and enabling automatic scaling with zero infrastructure overhead.
- Engineered a sliding-window conversational memory system with controlled prompt-state logic to maintain contextual coherence across sessions, reducing token consumption per inference call and keeping AI inference costs stable at scale.

Campus Companion – Role-Based Campus Management System 2025
Java, Node.js, Flutter, MongoDB, Firebase

- Built a Java-based REST backend centralizing schedules, event notifications, assignment alerts, classroom availability, and attendance tracking for 10,000+ students, applying Core Java OOP principles to keep service logic modular and independently maintainable.
- Designed an optimized MongoDB schema with JWT-based RBAC authentication, structuring role-separated access layers to minimize redundant query overhead and reduce average read latency across student, faculty, and admin workflows.

AI-Based Video Proctoring System – Multi-Modal Computer Vision Pipeline 2024 – 2025
Python, OpenCV, YOLO, CNN

- Developed a modular computer vision pipeline using YOLOv8 and CNN-based gaze analysis to detect examination malpractice from both real-time and recorded video streams, making proctoring scalable without requiring human reviewers per session. detection and gaze analysis.
- Systematically tuned model architecture and dataset composition to achieve 92% multi-class detection accuracy, while optimizing frame-sampling intervals to reduce processing load and auto-generating timestamped violation highlight clips to cut manual review time.

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C++
Java & Backend: Core Java, OOP, Spring Boot, JDBC, Maven, REST APIs, JWT Authentication
Web & Frontend Development: Node.js, Django, React.js, JavaScript (ES6+), HTML5, CSS3
Cloud & DevOps: AWS (Lambda, API Gateway, S3, CloudFront, IAM), Git, GitHub
Databases: MongoDB, MySQL, SQL
AI / ML & Computer Vision: YOLOv8, CNN, OpenCV, NumPy, Pandas, Scikit-learn

Tools & Platforms: Postman, Figma, Linux, Shell Scripting

Core CS Fundamentals: Data Structures & Algorithms, OOP, DBMS,Analytical Reasoning, Distributed Computing

PUBLICATIONS

HELPR – Helmet Enforcement and License Plate Reconnaissance 2025

- IEEE-indexed conference publication proposing an AI-based traffic surveillance system for helmet violation detection and license plate recognition.
- Implemented YOLOv8 object detection and EasyOCR pipeline trained on a curated dataset of 1500+ images.
- Achieved approx. 92% classification accuracy and demonstrated reliable OCR extraction for license plate identification.

ACHIEVEMENTS

- **IIT Kharagpur BizTech Hackathon** — Semi-Finalist
- **AI for Bharat Hackathon (AWS)** — Semi-Finalist
- **TVS Credit E.P.I.C 7.0 IT Challenge** — Semi-Finalist
- **NHAI Hackathon** — Semi-Finalist
- **NASA Space Apps Challenge** — Participant
- **Google Agentic AI Hackathon** — Participant

HONORS AND AWARDS

- **JEE Advanced Qualified** — National-level engineering entrance examination (2023)
- **International Astronomy & Space Olympiad** — Global Rank 1075 (2022)
- **Myntra Trend Set.GO** — Shortlisted for innovation challenge (2025)

VOLUNTEER EXPERIENCE

SSR Project – Healthy Bites: Eat Right, Live Bright Oct 2025

- Conducted a nutrition awareness session for school students focusing on balanced diets and healthy lifestyle habits.
- Delivered interactive presentations and visual demonstrations to encourage practical healthy eating practices.
- Collaborated with team members to organize the outreach program while strengthening communication and teamwork skills.

LANGUAGES

English, Telugu — Fluent

Hindi — Intermediate

Tamil, Malayalam — Beginner